

<110> Arkray, Inc.

<120> Method for producing glucose dehydrogenase

<130> G843-OPC4051

<150> JP 2003-82739

<151> 2003-03-25

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<170> PatentIn Ver. 2.0

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<213> Burkholderia cepacia

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<222> (764).. (2380)

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<212> PRT

<213> Burkholderia cepacia

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<213> Burkholderia cepacia

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gtg cgg aaa tct act ctc act ttc ctc atc gcc ggc tgc ctc gcg ttg 168
Val Arg Lys Ser Thr Leu Thr Phe Leu Ile Ala Gly Cys Leu Ala Leu
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Arg Gly Glu Tyr Leu Ala Thr Ala Met Pro Val Pro Met Leu Gly Lys
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Ile Tyr Thr Ser Asn Ile Thr Pro Asp Pro Asp Thr Gly Asp Cys Met
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Ala Cys His Thr Val Lys Gly Gly Lys Pro Tyr Ala Gly Gly Leu Gly
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Gly Ile Gly Lys Trp Thr Phe Glu Asp Phe Glu Arg Ala Val Arg His
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Gly Val Ser Lys Asn Gly Asp Asn Leu Tyr Pro Ala Met Pro Tyr Val
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Ser Tyr Ala Lys Ile Lys Asp Asp Asp Val Arg Ala Leu Tyr Ala Tyr
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Phe Met His Gly Val Glu Pro Val Lys Gln Ala Pro Pro Lys Asn Glu
           130          135          140
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Ile Pro Ala Leu Leu Ser Met Arg Trp Pro Leu Lys Ile Trp Asn Trp
           145          150          155          160
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gaa	acc	ggc	ggc	agc	ttc	ctc	gcg	ggg	tgc	gtg	ctc	gcc	ggc	tgg	gac	792	
Glu	Thr	Gly	Gly	Ser	Phe	Leu	Ala	Gly	Ser	Val	Leu	Ala	Gly	Trp	Asp		
210				215				220									
ggc	tac	aac	atc	acg	tgc	gac	ccg	aat	gcg	ggg	atc	ggc	agc	tgg	acg	840	
Gly	Tyr	Asn	Ile	Thr	Ser	Asp	Pro	Asn	Ala	Gly	Ile	Gly	Ser	Trp	Thr		
225				230				235				240					
cag	cag	cag	ctc	gtg	cag	tat	ttg	cgc	acc	ggc	agc	gtg	ccg	ggc	gtc	888	
Gln	Gln	Gln	Leu	Val	Gln	Tyr	Leu	Arg	Thr	Gly	Ser	Val	Pro	Gly	Val		
245				250				255									
gcg	cag	gcg	gcc	ggg	ccg	atg	gcc	gag	gcg	gtc	gag	cac	agc	ttc	tgc	936	
Ala	Gln	Ala	Ala	Gly	Pro	Met	Ala	Glu	Ala	Val	Glu	His	Ser	Phe	Ser		
260				265				270									
aag	atg	acc	gaa	gcg	gac	atc	ggt	gcg	atc	gcc	acg	tac	gtc	cgc	acg	984	
Lys	Met	Thr	Glu	Ala	Asp	Ile	Gly	Ala	Ile	Ala	Thr	Tyr	Val	Arg	Thr		
275				280				285									
gtg	ccg	gcc	gtt	gcc	gac	agc	aac	gcg	aag	cag	ccg	cgg	tgc	tgc	tgg	1032	
Val	Pro	Ala	Val	Ala	Asp	Ser	Asn	Ala	Lys	Gln	Pro	Arg	Ser	Ser	Trp		
290				295				300									
ggc	aag	ccg	gcc	gag	gac	ggg	ctg	aag	ctg	cgc	ggt	gtc	gcg	ctc	gcg	1080	
Gly	Lys	Pro	Ala	Glu	Asp	Gly	Leu	Lys	Leu	Arg	Gly	Val	Ala	Leu	Ala		
305				310				315				320					
tgc	tgc	ggc	atc	gat	ccg	gcg	cgg	ctg	tat	ctc	ggc	aac	tgc	gcg	acg	1128	
Ser	Ser	Gly	Ile	Asp	Pro	Ala	Arg	Leu	Tyr	Leu	Gly	Asn	Cys	Ala	Thr		
325				330				335									
tgc	cac	cag	atg	cag	ggc	aag	ggc	acg	ccg	gac	ggc	tat	tac	ccg	tgc	1176	
Cys	His	Gln	Met	Gln	Gly	Lys	Gly	Thr	Pro	Asp	Gly	Tyr	Tyr	Pro	Ser		
340				345				350									
ctg	ttc	cac	aac	tcc	acc	gtc	ggc	gcg	tgc	aat	ccg	tgc	aac	ctc	gtg	1224	
Leu	Phe	His	Asn	Ser	Thr	Val	Gly	Ala	Ser	Asn	Pro	Ser	Asn	Leu	Val		
355				360				365									
cag	gtg	atc	ctg	aac	ggc	gtg	cag	cgc	aag	atc	ggc	agc	gag	gat	atc	1272	
Gln	Val	Ile	Leu	Asn	Gly	Val	Gln	Arg	Lys	Ile	Gly	Ser	Glu	Asp	Ile		
370				375				380									
ggg	atg	ccc	gct	ttc	cgc	tac	gat	ctg	aac	gac	gcg	cag	atc	gcc	gcg	1320	
Gly	Met	Pro	Ala	Phe	Arg	Tyr	Asp	Leu	Asn	Asp	Ala	Gln	Ile	Ala	Ala		
385				390				395				400					

ctg acg aac tac gtg acc gcg cag ttc ggc aat ccg gcg gcg aag gtg 1368
 Leu Thr Asn Tyr Val Thr Ala Gln Phe Gly Asn Pro Ala Ala Lys Val
 405 410 415
 acg gag cag gac gtc gcg aag ctg cgc tga catagtcggg cgcgccgaca 1418
 Thr Glu Gln Asp Val Ala Lys Leu Arg
 420 425
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<211> 425

<212> PRT

<213> Burkholderia cepacia

<400> 10

Val Arg Lys Ser Thr Leu Thr Phe Leu Ile Ala Gly Cys Leu Ala Leu
 1 5 10 15
 Pro Gly Phe Ala Arg Ala Ala Asp Ala Ala Asp Pro Ala Leu Val Lys
 20 25 30
 Arg Gly Glu Tyr Leu Ala Thr Ala Met Pro Val Pro Met Leu Gly Lys
 35 40 45
 Ile Tyr Thr Ser Asn Ile Thr Pro Asp Pro Asp Thr Gly Asp Cys Met
 50 55 60
 Ala Cys His Thr Val Lys Gly Gly Lys Pro Tyr Ala Gly Gly Leu Gly
 65 70 75 80
 Gly Ile Gly Lys Trp Thr Phe Glu Asp Phe Glu Arg Ala Val Arg His
 85 90 95
 Gly Val Ser Lys Asn Gly Asp Asn Leu Tyr Pro Ala Met Pro Tyr Val
 100 105 110
 Ser Tyr Ala Lys Ile Lys Asp Asp Asp Val Arg Ala Leu Tyr Ala Tyr
 115 120 125
 Phe Met His Gly Val Glu Pro Val Lys Gln Ala Pro Pro Lys Asn Glu
 130 135 140
 Ile Pro Ala Leu Leu Ser Met Arg Trp Pro Leu Lys Ile Trp Asn Trp
 145 150 155 160
 Leu Phe Leu Lys Asp Gly Pro Tyr Gln Pro Lys Pro Ser Gln Ser Ala
 165 170 175
 Glu Trp Asn Arg Gly Ala Tyr Leu Val Gln Gly Leu Ala His Cys Ser
 180 185 190
 Thr Cys His Thr Pro Arg Gly Ile Ala Met Gln Glu Lys Ser Leu Asp
 195 200 205
 Glu Thr Gly Gly Ser Phe Leu Ala Gly Ser Val Leu Ala Gly Trp Asp
 210 215 220
 Gly Tyr Asn Ile Thr Ser Asp Pro Asn Ala Gly Ile Gly Ser Trp Thr

12/13

225		230		235		240									
Gln	Gln	Gln	Leu	Val	Gln	Tyr	Leu	Arg	Thr	Gly	Ser	Val	Pro	Gly	Val
		245							250					255	
Ala	Gln	Ala	Ala	Gly	Pro	Met	Ala	Glu	Ala	Val	Glu	His	Ser	Phe	Ser
		260							265					270	
Lys	Met	Thr	Glu	Ala	Asp	Ile	Gly	Ala	Ile	Ala	Thr	Tyr	Val	Arg	Thr
		275						280						285	
Val	Pro	Ala	Val	Ala	Asp	Ser	Asn	Ala	Lys	Gln	Pro	Arg	Ser	Ser	Trp
	290						295				300				
Gly	Lys	Pro	Ala	Glu	Asp	Gly	Leu	Lys	Leu	Arg	Gly	Val	Ala	Leu	Ala
305					310					315				320	
Ser	Ser	Gly	Ile	Asp	Pro	Ala	Arg	Leu	Tyr	Leu	Gly	Asn	Cys	Ala	Thr
			325						330					335	
Cys	His	Gln	Met	Gln	Gly	Lys	Gly	Thr	Pro	Asp	Gly	Tyr	Tyr	Pro	Ser
		340						345						350	
Leu	Phe	His	Asn	Ser	Thr	Val	Gly	Ala	Ser	Asn	Pro	Ser	Asn	Leu	Val
		355						360						365	
Gln	Val	Ile	Leu	Asn	Gly	Val	Gln	Arg	Lys	Ile	Gly	Ser	Glu	Asp	Ile
	370					375					380				
Gly	Met	Pro	Ala	Phe	Arg	Tyr	Asp	Leu	Asn	Asp	Ala	Gln	Ile	Ala	Ala
385					390					395				400	
Leu	Thr	Asn	Tyr	Val	Thr	Ala	Gln	Phe	Gly	Asn	Pro	Ala	Ala	Lys	Val
			405						410					415	
Thr	Glu	Gln	Asp	Val	Ala	Lys	Leu	Arg							
		420						425							

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<212> PRT

<213> Artificial Sequence

<220>

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<220>

<221> UNSURE

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<223> Xaa=unknown

<400> 11

Cys Xaa Xaa Cys His

1

5

<210> 12

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 12

catgccatgg cacacaacga caacac

26

<210> 13

<211> 30

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer

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gtcgacgatc ttcttccagc cgaacatcac

30

<210> 14

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

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30

<210> 15

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

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30